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CENTRAL INTELLIGENCE AGENCY

## REPORT

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SOURCE GOST 3334-46.

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USSR STANDARD FOR LUBRICANT<sup>TM</sup> NO 12 (VP) (GOST 3334-46)

(Petroleum Industry B 24)

1. This standard deals with the lubricant designed for PUAZO mechanisms and other artillery apparatus in all seasons of the year.

- | 2. Composition of the lubricant             | Percent by Wt |
|---|---------------|
| a. Transformer oil (GOST 982-43)            | 85-89         |
| b. Ceresin (GOST 2488-44, grades 67 and 75) | 12-14         |
| c. Sodium soap of oleic acid (OST NKPP 515) | 1.0-1.5       |

3. The lubricant must fulfill the following requirements: Appearance and properties -- vaseline-like substance of yellow color.

<u>Physicochemical Properties</u>	<u>Values</u>	<u>Test Method</u>
1. Corrosion test on steel and copper plates at 100° C for 3 hr	Passes	In accordance with point 4 of this standard
2. Test of preservative property on steel plates (15 days)	Passes	OST NKTf 7872/2292, M.I. 29b-37
3. Ability to maintain an unbroken coating on metal surface for 24 hr		OST NKTf 7872/2292, M.I. 83-37
At 40° C not less than	2.0 mg/sq cm	
At 60° C not less than	0.6 mg/sq cm	

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<u>Physicochemical Properties</u>	<u>Values</u>	<u>Test Method</u>
4. Content of free organic acid (mg KOH/g) not more than	0.1	OST NKTP 7872/2292, M.I. 25k-37
5. Content of free alkali	None	OST NKTP 7872/2292, M.I. 25k-37
6. Total content of organic acid	0.7-1.2	OST NKTP 7872/2292, M.I. 25 1-36
7. Reaction of lubricant	Slightly alkaline	OST NKTP 7872/2292, M.I. 251-37
8. Mechanical impurities	None	OST NKTP 7872/2292, M.I. 191-37
9. Water content	None	GOST 1548-42
10. Ash content, not more than	0.15%	OST NKTP 7872/2292, M.I. 26v-36

NOTE: Preservative-property test is carried out on steel plates of Type 40 or 50 (GOST B-1050-41).

4. Analysis of corrosive action of the lubricant is made: (1) on steel plates, Type 40 or 50 (GOST B-1050-41) and (2) on copper plates, Type M2 (GOST 859-41).

The polished metal plates, prepared in accordance with OST NKTP 7872/2292, M.I. 29b-37, are immersed and vertically suspended in lubricant first heated to a temperature of 95° C, and kept in it for 3 hr at a temperature of 100±2° C inside a thermostat.

Each analysis is carried out on two similar plates. After the analysis the plates are drawn out of the lubricant and successively rinsed in a porcelain bowl containing a warm alcohol-benzene mixture (one part ethyl alcohol to four parts pure benzene by volume), or containing light sulfur-free gasoline. After being carefully washed down several times with the alcohol-benzene mixture or the gasoline, the steel plates are immediately rubbed dry with absorbent cotton and carefully examined. The copper plates are first examined for evidence of green corrosion, gently rubbed dry with absorbent cotton, and again carefully examined.


The lubricant is considered to have passed the test if there is no green, iridescent tarnish, nor any tinge of color apparent to the unaided eye on its surface and no spots of corrosion on the surface of the steel plates.

If traces of corrosion should be noticed on only one of the plates, the test is repeated. In the second test, if there is only one spot of corrosion on one of the plates, the lubricant is considered to have failed the test.

5. Packing, labeling, storage, transport, and delivery of the lubricant are carried out in accordance with GOST 1510-45 with the following provisions.

The lubricant is poured into tin containers not more than 20 liters<sup>c</sup> in capacity. On the side of each container a stenciled label is made with the name of the lubricant and the year of its manufacture. The label must be made with black enamel, indelible in water and mineral oil. The cans of lubricant are smeared on all outside surfaces with a mixture of rifle and cannon preservative grease (1:1) and packed for shipment in wooden crates, conforming to the design and technical specifications approved by GAU VS.

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6. Selection of samples of the lubricant is carried out in accordance with GOST 2517-44. For a control sample, 1 kilogram of the lubricant is set aside.

Proposed by the Ministry of the Petroleum Industry of the South and West Regions of the USSR.

Approved by the All-Union Committee on Standards 15 November 1946.

Effective 1 January 1947.

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